

FLIGHT

The
AIRCRAFT
ENGINEER
&
AIRSHIPS

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Founder and Editor : STANLEY SPOONER

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"FLIGHT" PHOTOGRAPHS.

To those desirous of obtaining copies of "Flight" Photographs, these can be supplied, enlarged or otherwise, upon application to Photo. Department, 36, Great Queen Street, W.C.2

DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list:—

1927	
Jan. 25	"Some Notes on the Design of Airscrews." Capt. F. S. Barnwell, before Inst.Ae.E.
Feb. 1	"Super-charging for Aero Engines." Mr. A. H. R. Fedden, before R.Ae.S.
Feb. 10	Paper (to be announced later). Mr. H. P. Folland, before Inst.Ae.E.
Feb. 17	"The Design and Operation of Commercial Aircraft." Major R. H. Mayo, before R.Ae.S.
Feb. 22	"The Manufacture and Testing of Mechanical Units for Aircraft." Lieut.-Colonel L. F. R. Fell, before Inst.Ae.E.

EDITORIAL COMMENT.



WORLD'S records are somewhat to the fore at the moment. At the meeting of the Committee of the *Fédération Aéronautique Internationale* in Paris on December 16 and 17 last year the subject cropped up in various forms, as will be seen from the Official Notices of the Royal Aero Club in this week's issue of FLIGHT. Italy asked permission to reconsider the decision of the Rome Conference to hold the Schneider Cup Race every other year, presumably wishing to get back to the annual basis. It was decided that, in future, machines must, in order to qualify for world's high-speed records, have made two safe alightings. And finally, the subject of recognising records established by light aeroplanes was discussed.

As regards the holding of the Schneider Cup Race annually, there seems to be a good deal to be said for going back to this basis. At the same time, it is, perhaps, a little curious that, although the decision to hold the race every other year was taken at the Rome Conference, Italy has now decided to apply for the old annual basis to be restored, presumably with the object of ensuring that the next Schneider Cup race shall be held this year. At the meeting of the Paris committee it was decided that the committee had no powers to grant Italy's request, and it was decided to refer the question to an Extraordinary Conference to be held in Paris on January 25.

What has prompted Italy to make this demand we do not, of course, know. It may be that Italian enthusiasm runs high (as well it may) following the magnificent Italian victory at Hampton Roads, and that Italian aviation circles wish to "strike while the iron is hot," fearing a diminution in interest if the race is deferred until 1928. It may be, although personally we do not lean to this opinion, that Italy considers her chances of winning the race next time to be better if that next time is this year, before America has time to build new machines, before France has time to build any at all, and before Great Britain's new high-speed seaplanes have had time

to be thoroughly tested out. As we said, it may be all this, although, frankly, we do not think so. In any case, the motive does not concern us, who are only interested in the likely effect of a decision to hold the race this year. The British machines are coming along. The Air Ministry pretends that there is a great secrecy surrounding these machines. Actually it seems likely that both our Italian and our American friends know all that it matters to know about them, but if it amuses the Air Ministry to maintain its little bluff, probably no harm is done. For obvious reasons, one cannot go into details concerning the British machines, but they have been designed with a good margin in view. That that margin is large enough to make it a matter of indifference whether our rivals in the race have or have not time to build new types we should hesitate to say. What we do think, however, is that even for the postponed race in 1928 our machines should stand a good sporting chance. We gather from friends in France that if the race is held this year it is very doubtful whether there will be any French challengers. On the other hand, if the race is postponed until next year, there is a very good chance that France may enter. The United States would probably enter their existing machines if the race were held this year, but would almost certainly build new types for 1928. Either way, we do not think it would matter very much from the British point of view. However, we shall know the decision of the F.A.I. shortly, when the subject may be brought up again.

Italy complains, and we think very justly, that as the rules of the F.A.I. stand at present the speed records established by de Bernardi, an *Italian* pilot on an *Italian* machine with *Italian* engine in an *international* race can be and are claimed as *American*. Surely the time has come when this rule should be changed.

The new regulation of the F.A.I., that machines intended for world's speed records must, before making their attempt, have made two safe alightings is, obviously, intended to guard against some freak machine managing to stagger into the air, beat the record, and then smashing on alighting. There has, in the past, been a great deal of talk about limiting the landing speed of these machines. With that view we have never agreed, and, in fact, we have repeatedly pointed out that by thus placing a purely arbitrary limit on machines a great deal of harm might be done and progress hampered. The new rule is, in our opinion, infinitely preferable, as it places no restrictions on the designer of machines, provided his machine is able to alight safely twice before any record attempt. After all, it is the safety of the machine that matters, and not the manner in which that safety is attained.

The Federation is also working on the subject of recognising records established by light aeroplanes. Before anything can be done it is necessary to define what constitutes a light 'plane, and apparently the F.A.I. has chosen as a basis the empty weight of the machine. Further, it has been decided to divide light 'planes into two classes: Those with an empty weight of less than 200 kg. (440 lbs.), and those weighing not less than 200 kg. and not more than 400 kg. (880 lbs.). The British representatives suggest that the upper limit for the heavier class should be reduced to 350 kg. In view of the fact that this classification is for record purposes only, we think this suggestion is sound. After all, for a machine designed, or at

any rate adapted, for the purpose of establishing records, it is not difficult to load up with a weight at least equal to the empty weight, and at the upper end of the scale this would bring us to aeroplanes with a total loaded weight of 800 kg. (1,760 lbs.), which is beginning to get rather far away from the light 'plane idea or ideal. Also, with an empty weight of 880 lbs. it would be possible to produce machines with relatively powerful engines, which is not a thing one wants to encourage. It is to be feared that if the figure of 350 kilos. be adopted, the standard production "Moth" would be ruled out, and this can only be a matter for regret. But the "Moth" has been "ruled out" before, and is still far and away the most popular light 'plane in the world, so presumably a little thing like being debarred from world's records would not seriously affect its triumphant progress. And in any case, if the de Havilland Aircraft Company were minded to go for records with the "Moth" it would probably not be impossible so to "arrange" a machine for record purposes as to bring it within the 770 lbs. limit. But it is certainly a curious coincidence that time after time the "Moth" has been "ruled out" in spite of the fact that its excellence is admitted on all sides.

17,000 Miles in 3 Months

There can be no doubt that among the many splendid flights made during the last year or so, that just concluded by the safe arrival back in Paris of the Liore & Olivier flying boat piloted by Lieut. Bernard of the French Naval Air Service must be given a place in the very foremost ranks. Lieut. Bernard has, during his flight to Madagascar and back, covered a total distance of roughly 17,000 miles, and has only taken three months to do it. Considering that his course lay, on the outward journey, along the coast of North-west Africa, then along the rivers of Central Africa to the lakes, and across to Madagascar, in other words, much of it in tropical countries, the flight is a most meritorious one. And it should be recollected that the machine used by Lieut. Bernard was not an amphibian but a plain flying-boat. Although rivers were naturally followed wherever possible, there must have been many occasions during the flight when cross-country flights of very considerable duration had to be made from one waterway to another, and when a forced landing would have been likely to result in serious consequences. It is, therefore, all the more gratifying to be able to place on record the fact that the Gnome-Rhone "Jupiter" gave no trouble whatever. Not only so, but that practically speaking no replacements were made during the flight, and none of the engine spares carried on board the machine were required. Thus the "Jupiter" has added one more to its long list of successes. We in this country can rejoice in the thought that the engine used was of British design, and owes its existence to British brains, even if the hands that shaped the actual engine used were French.

Among the number of famous French flights carried out recently, this one stands out as something in a class by itself. Whereas most of the flights which carried French aviation to fame during 1926 were long-distance, non-stop flights, Lieut. Bernard's was more of the type of Sir Alan Cobham's flights, i.e., prolonged tours over difficult and greatly varying forms of country. In that lies, we think, not the least merit of the flight.



[“FLIGHT” Photographs]

PASSING OUT OF APPRENTICES AT HALTON : The upper photograph shows Marshal of the Royal Air Force, Sir Hugh Trenchard, Bart., G.C.B., D.S.O., Chief of the Air Staff, inspecting the apprentices. With Sir Hugh are: (left) Group Captain W. G. S. Mitchell, C.B.E., D.S.O., M.C., A.F.C., Assistant Commandant at Halton, Squadron-Leader C. G. Burge, O.B.E., Personal Assistant to the C.A.S., and Wing-Commander B. E. Sutton, D.S.O., O.B.E., M.C., p.s.a., Officer Commanding No. 1 Apprentices Wing, Halton. The photograph in the centre shows Sir Hugh Trenchard taking the salute at the march past, while the lower picture represents the C.A.S. delivering his address,

PASSING-OUT INSPECTION AT HALTON

ON January 11 Marshal Sir Hugh Trenchard inspected the passing out of 576 Aircraft Apprentices at the No. 1 School of Technical Training, Halton. In his report, the Air Officer Commanding, Air Vice Marshal C. L. Lambe, states that this Entry is the fourth to complete the course at Halton, and of the 665 originally enlisted 40 were posted to Flowderdown for training as wireless operator mechanics, 8 transferred to other Entries, 3 died, 38 were discharged on medical grounds or as unlikely to become efficient airmen, and one was transferred from the 1923 Entry, leaving 576 to be passed out then. These have been trained as follows:—Fitters Aero Engines, 273; Fitters Driver Petrol, 50; Fitters Armourer, 50; Turners, 44; Coppersmiths, 64; Carpenter Riggers, 95.

The report approves of the disciplinary standard of the 1924 Entry and hopes that when the System Unit Training by Wings is in force there will be further improvement in certain routine marching in the Halton Camp. The standard of Manual Dexterity was high, exhibits embracing the syllabus of all trades being made at two Public Exhibitions which, it was hoped, will be repeated.

New Brake-Testing Plant has been installed which is proving of great practical value in the demonstration of timing faults and also in the testing of engines erected by the Apprentices. As an interesting sign of their skill the Carpenter Riggers constructed three complete "Grebe" machines, cutting the wooden sections from plank and using metal fittings taken from crashed machines.

There is now a close co-operation between Shops and School, the Entry in School Work has been of high class and the largest of any before; new buildings and equipment have been added and the reports from visiting experts were very encouraging. The general health of the Apprentices was good, a keenness being shown in Physical Training and Sports.

In the final examinations conducted for the most part by the Central Trade Test Board, 43 Apprentices were classified as L.A.C., 173 as A.C.1, 281 as A.C.2, 72 failed and 7 were not examined.

Cadetships were offered to F. C. Sturgiss, J. D. Rutherford, and W. P. Beaman. The following Awards offered by the Air Ministry were won:—The prize for the Grand Aggregate, to F. C. Sturgiss; Prize for the Best Fitter Aero Engine, to N. Walker; Prize for Best Fitter Armourer, to J. D. S. Rogers; Prize for the Best Fitter Driver Petrol, to P. W. Nunn; Prize for the Best Coppersmith, to T. Turner; Prize for the Best Carpenter Rigger, to A. C. W. Booth; Prize for Educational Subjects, to R. S. Amis; Prize for Best Turner, to W. J. Dunn.

Twelve boys were granted advance courses, as follows:—N. Walker, J. G. S. Rogers, H. A. Pritchard, S. A. Feaver, P. W. Nunn, G. R. Piggett, J. M. C. Q. Fitch, W. R. Watts, W. H. Baxter, G. H. Cann, R. Parr and G. A. S. Pett.

After inspecting the workshops Sir Hugh Trenchard presented prizes to a number of apprentices for success in certain subjects and then addressed about 3,000 boys in the huge gymnasium. He congratulated them on their fine discipline and bearing and advised them to keep fit. It would tell otherwise if ever they had to look after an engine in a desert, under the sun. He hoped one day that a boy apprentice trained at Halton would occupy his chair. The Air Service was extensive and each member could not be individually mothered, so that each had to help themselves. Now that a boy's wing had been transferred from Cranwell, Halton was the final conception of what a training station should be. They were drawing the right type of boy into the Service, which was increasing in popularity and having a wider influence in the control of the Empire.

THE ROYAL AERO CLUB OF THE U.K.

OFFICIAL NOTICES TO MEMBERS

COMMITTEE MEETING

A MEETING of the Committee was held on Wednesday, January 12, 1927, at 5 o'clock, when there were present:—Brig.-Gen. Lord Thomson, P.C., C.B.E., D.S.O., in the Chair, Mr. E. J. B. How, Col. F. Lindsay Lloyd, C.M.G., C.B.E., Lieut.-Col. M. O'Gorman, C.B., Mr. F. Handley Page, C.B.E., Major S. V. Sippe, D.S.O., Mr. T. O. M. Sopwith, C.B.E., and the secretary.

Election of Members.—The following New Members were elected:—

Flying Officer A. J. Hytch.
Flying Officer R. W. Reeve.
J. Laurence Pritchard.
M. L. Bramson.
G. F. Dawkins.
Leslie Charles Davey.

Aviators' Certificates.—The following Aviators' Certificates were granted:—

8057.	Martin B. Lax	..	Yorkshire Aeroplane Club.
8058.	F. H. Mason	..	Henderson's School.
8059.	W. L. Stewart-Macleod		London Aeroplane Club.
8060.	A. G. Haward	...	De Havilland School.
8061.	John D. Irving	..	Newcastle Aero Club.
8062.	Hugh Spooner	..	London Aeroplane Club.
8063.	Eric John Earnshaw		De Havilland School.
8064.	John F. C. Brinton		Midland Aero Club.

F.A.I. Paris Committee.—Lieut.-Col. M. O'Gorman, C.B., presented his report on the F.A.I. Committee Meetings in Paris on December 16 and 17, 1926.

Schneider Cup.—The Italian Aero Club requested permission to reconsider the decision passed at the Rome Conference to hold the race biennially. It was decided that the Committee could not deal with the matter, and that an Extraordinary Conference should be called for January 25, 1927, in Paris, at which the question could be reopened.

High-Speed Records.—It was decided that machines must have made two safe alightings prior to any attempts on high speed records.

World's Records for Light Aeroplanes.—It was suggested that there should be two classes:—

- (1) Machines weighing empty under 200 kilos.
- (2) Machines weighing empty 200 kilos. and not exceeding 400 kilos.

The Royal Aero Club suggested that in Class 2 the maximum weight empty should be reduced to 350 kilos. The classification will be decided at the Conference on January 25, 1927.

The Gold Medal of the F.A.I.—The Gold Medal of the F.A.I. for the year 1926 was awarded to Sir Alan J. Cobham for his flight to Australia and back.

The other questions dealt with were:—Distance records over sea. Basis for valuing machines for customs purposes. Timing of high-speed records. Height records and temperature. Suspensions and disqualifications.

The committee passed a vote of thanks to Lieut.-Col. M. O'Gorman for attending the Conference on behalf of the Club.

Lieut.-Col. M. O'Gorman was appointed the Club Delegate at the Extraordinary Conference to be held in Paris on January 25, 1927.

Racing Committee.—The report of the Racing Committee held on December 20, 1926, was received and adopted. The Report included the recommendations for the King's Cup and Grosvenor Challenge Cup Races.

Britannia Challenge Trophy.—It was decided to consider the meritorious performances in 1926 for the award of the Britannia Trophy at the next meeting.

Annual General Meeting.—It was decided to hold the Annual General Meeting of the Club on Wednesday, March 30, 1927.

Secretary of State, Flight to India.—The following cables were reported:—

To Sir Samuel Hoare:—"Hearty congratulations to yourself and Lady Maud on your arrival in India after inaugural flight so successfully accomplished."—Royal Aero Club.

To Royal Aero Club:—"Lady Maud and I thank you for your telegram, which we greatly appreciate."—Sir Samuel Hoare.

"Moths" Flight to India.—The following cable to Capt. Stack:—"Hearty congratulations to you and Leete on your splendid achievement."—Royal Aero Club.

Offices: THE ROYAL AERO CLUB,

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H. E. PERRIN, Secretary.

AN AMERICAN TWIN-ENGINEED LIGHT 'PLANE

The "Johnson Twin 60," with Two Bristol "Cherubs"

THE multi-engine idea seems to be spreading. From single-engined aeroplanes we went to twin-engined, and from twin-engined to three-engined. Nor has this evolution been confined entirely to very large, powerful machines, although, naturally enough, these were the first to be produced. Thus, in this country, we had last year the Handley Page "Hamlet," a small three-engined commercial passenger machine with

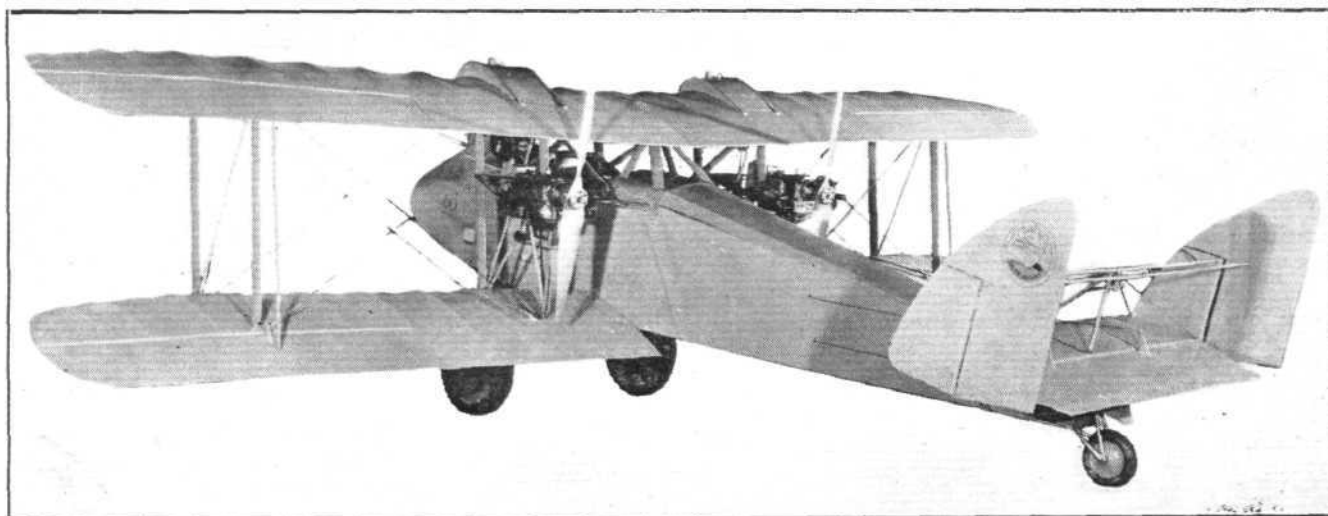
such a machine is really worth while is, perhaps, open to debate. To begin with, the twin-engined aeroplane, unless capable of flying on one of its engines, is illogical. In the case of the Short "Cockle" this was not the case, and there was very excellent reason for using the twin-engined arrangement, because with a *monoplane* flying-boat no other arrangement was possible, or, at any rate, practicable. In the case of the



A TWIN-ENGINEED LIGHT 'PLANE: Side view of the Johnson "Twin 60" with two Bristol "Cherub" Series III engines.

three Bristol "Lucifer" engines. We ourselves have suggested in *FLIGHT* that the small machine of this type, with even lower total power than that of the "Hamlet," might be a useful type for certain localities and conditions. In the seaplane class we have had the little Short "Cockle," fitted with two Blackburne motor-cycle engines, which flies very well and is now, we believe, about to be equipped with two Bristol "Cherubs." Thus there is nothing particularly

Johnson "Twin 60," however, it is less obvious what was in the mind of the designer. Good view and absence of slipstream, probably, although the extra complication of the twin-engined principle would appear to be rather a high price to pay. It might have been thought that if these two desiderata were the *raison d'être* of the "Twin 60," a simple way of obtaining them would have been to follow rather the lay-out of the little "Albatros L.72," described and illustrated



THE JOHNSON "TWIN 60": THREE-QUARTER REAR VIEW: Note the two petrol tanks on the top plane, the Reed Duralumin pusher airscrews, and the twin rudders. The tail skid has been supplanted by a swivelling wheel to facilitate taxiing. The friction thus lost is made up for by a wheel-brake arrangement in the main undercarriage.

startling in the general design of the two-seater light 'plane recently produced by the Johnson Airplane and Supply Company, of Dayton, Ohio, U.S.A., a machine fitted with two Bristol "Cherub" series III engines.

The accompanying photographs show this machine to be a twin-engined pusher, looking in its general lay-out like a small edition of a large twin-engined machine. Whether

in *FLIGHT* of January 28, 1926. That machine was "a flying-boat on wheels," with the Siemens engines mounted behind the top plane and driving a pusher airscrew. That this arrangement necessitated the usual difference between centre of resistance and centre of thrust associated with the flying-boat type was probably of small moment in a machine of such small size and power.



The Johnson "Twin 60" taking off in a cross-wind.

It is, of course, possible that the Johnson "Twin 60" will fly on either of its two "Cherub" engines, in which case the criticisms fall away automatically. Pending the arrival in this country of more detailed information, one cannot say. In the meantime it is worth recording its production as an interesting experiment.

For the time being all that is known concerning the "Twin 60" is that it is reported to weigh 860 lbs., and that with pilot, one passenger and 22 gallons of fuel it gets off the ground from standing start in 3 seconds (!), while the climb to 3,000 ft. is accomplished at the rate of 500 ft./min. The machine is credited with a top speed of 85 m.p.h., and the landing speed is given as about 22.5 m.p.h. The latter figure, at any rate, seems open to doubt. We have no figures for wing loading, but, even allowing for a high-lift section (that used appears from the photographs to be one of the Göttingen "tadpole" sections), a landing speed as low as 22 m.p.h. would seem to infer a maximum lift coefficient rather higher than appears likely to be attained. However, even if the landing speed is 32 m.p.h., instead of 22, it should be low enough to ensure a very considerable degree of safety.

It is reported that the machine has been thoroughly tested out for taking off and alighting under particularly difficult conditions, and has been found to behave very well indeed. One of the accompanying photographs shows the machine taking off alongside what appears to be a road or railway embankment, presumably in a cross-wind with the wind coming over the embankment and causing a down-draught, and the cinematograph operators give the appearance of being rather nervous and very possibly experiencing a considerable up-draught!

Features such as the two petrol tanks on the top plane, and the Reed Duralumin airscrews, as well as the twin rudders, can be seen in the photographs. The undercarriage is of the type using rubber rings in compression. The front legs are telescopic, while the lateral bracing is in the plane of the rear chassis struts. Some kind of wheel brake appears to be incorporated in the undercarriage.

After their many successes at home and abroad, no surprise need be expressed at the choice of the Bristol "Cherub" engines, which may certainly be relied upon to do their share towards making the Johnson "Twin 60" a success.

LIGHT 'PLANE CLUB DOINGS

London Aeroplane Club

The total flying time for the week ending January 16, 1927, was 22 hrs. 55 mins.

The following Members had flying instruction:—E. L. Winter, J. J. Hofer, O. J. Tapper, G. H. B. Madocks, C. R. Campkin, F. C. Elford, G. N. Howe, M. P. Susman, H. Solomon, A. E. Lingard, W. Hay, A. J. Richardson, H. M. Samuelson, G. C. Bonner, N. H. M. Watkins, H. O. Gugenheim, G. H. Saxon Mills, Miss Fletcher, E. J. B. King, L. G. Sykes, C. H. Swan, A. F. Wallace, F. Clarkson, G. R. Onions, J. H. Saffery, J. W. Whytlaw.

The following Members flew solo:—O. J. Tapper, H. Spooner, W. Hay, K. V. Wright, C. E. Murrell, N. Jones, S. O. Bradshaw, J. A. R. Stevenson, A. R. Ogston, G. H. Craig, J. H. Saffery.

The following Members had joy rides:—D. A. Wilson, H. J. Greenland, S. O. Bradshaw, G. Onions, F. F. Stephens, W. R. Simeons, F. F. Stephens, G. H. Craig.

G-EBKT, which was taken over on Monday, 10th inst., to replace G-EBNP, soon got into trouble. It was being flown solo by Capt. H. Spooner on the 11th inst. In making a forced landing he got into a ploughed portion of a field and the machine turned completely over. The damage, however, was very slight and the machine was again in commission during the week-end.

The Hampshire Aeroplane Club

Report for week ending January 14.—Total flying time, 10 hrs. 25 mins.; instruction flying, 8 hrs. 40 mins.; passenger flying, 1 hr. 15 mins.; solo flying, 30 mins.

The following Members had instruction:—Lieut. Cadell, R.N., 2 hrs. 5 mins.; Lieut. Heinemann, R.N., 1 hr. 40 mins.; Hon. H. R. Grosvenor, 1 hr. 10 mins.; Dobson, 50 mins.; Abel, 45 mins.; Somerset, 40 mins.; Señor de la Cierwa, 40 mins.; Courtney, 10 mins.; Graham, 10 mins.; Nicholson, 5 mins.

The following Members had joy rides:—Mrs. C. B. Fry, 35 mins.; Mrs. Cadell, 10 mins.; Miss B. Mossop, 10 mins.; Capt. Andrews, 10 mins.; Mr. E. V. Somerset, 10 mins.

The soloists were: Cooper, 20 mins.; and Fry, 10 mins.

Lancashire Aero Club

Report for week ending January 15.—Total flying time for the week, 16 hrs. 15 mins., made up as follows:—

Dual with Mr. Brown:—Messrs. Nelson, 1 hr. 5 mins.; Abdalla, Shiers and MacNair, 30 mins. each; Miss Brown, 30 mins.; Messrs. Gattrell, 25 mins.; Slater, 20 mins.; Dickinson and Forshaw, 15 mins. each.

Solo:—Messrs. Wade, 2 hrs. 20 mins.; Costa, 2 hrs.; Birley, 1 hr. 15 mins.; Twemlow, 1 hr.; Michelson, 30 mins.; Abdalla, 25 mins.; Goodfellow, 20 mins.

Joy rides:—With Mr. Costa: Mr. Giorgi, 30 mins.; Mr. Abdalla, 20 mins. With Mr. Cantrill: Mr. Williamson, 20 mins.; Mr. and Mrs. Proctor, 10 mins. each. With Mr. Lacayo: Mr. Hardy, 50 mins. With Mr. Goodfellow: Mr. Williams, 15 mins.

During the week Mr. Birley, Mr. Twemlow and Dr. Wade have all successfully accomplished their height tests. One is filled with admiration for these hardy fellows. To the north lies Rivington Pike, with other nasty protuberances round about; to the east and south-east and north-east lie the Yorkshire and Derbyshire ranges; to the south lies the high ground of Staffordshire and the Potteries, while to the west lie the Frodsham hills. With the clouds resting comfortably on all these excrescences and only small gaps of blue to climb into these brave birdmen, armed only with an aneroid and a few days' iron rations, set out day after day in search of their "A" licences. One can only say that they earn them. The palm this week, however, must be awarded to Mr. Costa who, competing in the height contest, climbed a "Moth" until the aneroid struck work and, in the words of the old tale, a little dicky bird came out and sang "Nearer, my God, to Thee."

It is really scandalous the way that important news items are kept back from the correspondent. Immediately on our return from Switzerland we rang up the aerodrome to inquire how much crashery had been committed in our absence. We were told "none." On arrival at the aerodrome we found L.V. in the hangar with the undercarriage removed and the fuselage stripped. "Aha!" we said, pointing the accusing finger, "a crash." "Crash, sir?" says the ground engineer, with a pained expression, "why, bless your heart, sir, that's nobbut a heavy atterrisage."

Midland Aero Club, Ltd.

Report for the week ending January 15.—The total flying time was 5 hrs. 28 mins.

The following members made solo flights:—E. J. Brighton, R. L. Jackson, H. J. Willis, W. Swann.

The following received dual instruction:—F. Coxhill, C. Fellowes.

The following had passenger flights with Mr. Brighton:—F. Coxhill, G. Aldridge, L. V. Mann.

On Saturday Mr. Brighton made his first flight on the Austin "Whippet."

During the absence of Capt. McDonough through illness, assistance has been rendered by one of the Club Members, Flying-Officer A. M. Glover, of the Royal Air Force Reserve.

The Yorkshire Aeroplane Club

Report for the week ending January 14, 1927.—The Club reopened after the Christmas vacation on Wednesday, January 5, though no flying was possible until the 9th.

The time flown for the week only amounted to 1 hr. 30 mins., consisting of 1 hr. 5 mins. solo, 15 mins. dual and a test flight occupying 10 mins.

Mr. Elam received the 15 mins. instruction, while the times for the soloists were as follows:—Messrs. Carter (with Mann), 40 mins.; Fielden (with Wilson), 10 mins.; Watson, 5 mins.; and Wood, 10 mins.

Given some good weather this week-end we hope to be able to record in next week's notes that several more of our Members have successfully completed their tests for the "A" licence, having arranged for Mr. Loton to come over on Sunday to observe them.

THE MEYERS "MIDGET" LIGHT 'PLANE

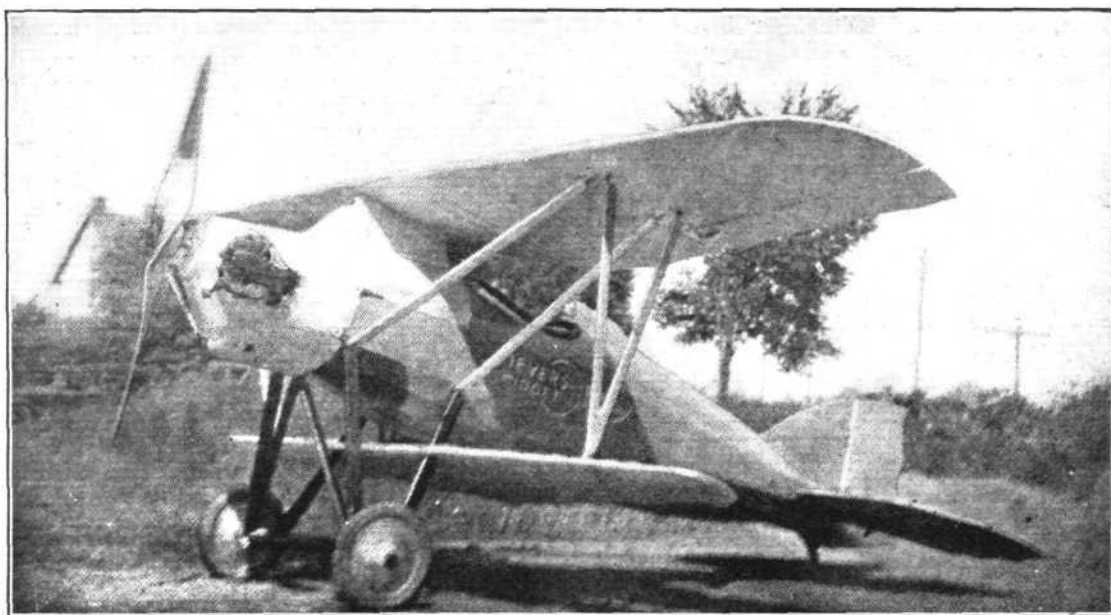
An American Machine with Bristol "Cherub" Engine

WE give this week, through the courtesy of our American contemporary *Aviation*, a description, with illustrations, of a recent example of a light 'plane developed in the "States." This machine, the Meyers "Midget," made its first appearance at the National Air Races at Philadelphia last September. In fact, it was only finished just in time for the races and actually made its first flight at the conclusion of the day's events on September 6. The "Midget" was designed by

able merit both in detail and finish. The upper and lower wings are tapered in plan form as well as in thickness, the wing section being a development of Mr. Meyers, known as M.6. The interplane bay is single, formed of a V-formation of struts, one pair on each side of the fuselage.

There is no interplane wire bracing, but two outward-sloping struts, extending, one pair on each side, from the bottom fuselage longeron to the upper wing spars at the points

The Meyers "Midget": An American light 'plane fitted with a Bristol "Cherub" engine. Three-quarter front view showing the neat engine cowling.



Charles W. Meyers and was constructed in the shops of the Kreider-Reisner Aircraft Company, of Hagerstown, Md., and is fitted with a British engine—the Bristol "Cherub."

Unfortunately, at the National Races the "Midget" had very bad luck and was forced down on the seventh lap of the first light 'plane race, owing to dirt collecting in the jets of the carburettor. Furthermore, owing to the extremely bad weather which had prevailed in Philadelphia, the forced land-

of attachment of the interplane V-struts. There is a 4-ft. difference in the spans of the upper and lower wings, and the chords of the two wings are accordingly proportionate. The wing spars are of channel spruce, with ribs of the same material; Warren trusses and birch gussets provide for rigidity in the structure.

The fuselage is formed of birch veneer bulkheads with a narrow veneer side, forming a girder from front to rear about



THE MEYERS "MIDGET": Three-quarter rear view of the American light 'plane fitted with a Bristol "Cherub" engine.

ing had to be made in extremely bad ground, with the result that in doing so the machine was damaged, although not so badly, as it might have been, sufficiently to prevent it taking part in other races. However, during its first test flight, the "Midget" demonstrated that it had a very good climb and speed, and appeared to be very controllable and comfortable to fly.

The construction of the Meyers "Midget" shows consider-

one-third of the actual depth of the fuselage. Spruce longerons of L-section are arranged on each side of this plywood girder, and these form the main structural members of the fuselage. Spruce fairing strips are mounted on both the upper and lower sides of the fuselage, thus providing fairing above and below the fuselage proper, giving an oval section. These fairing strips are so placed as to take part of the vertical stresses.

A double plywood and veneer girder runs from under the seat, through the bottom and centre of the fuselage to the rear of the bulkhead, just behind the engine. This carries the pilot's seat, controls, and also provides a mounting for the lower wing and two cross-bracing members of the undercarriage structure, in addition to forming a foundation for certain cross-bracing members of the engine mount at the front end.

The engine mounting is of welded steel tubing, as are all wing struts and landing-gear struts; all struts are faired with balsa wood. The covering of the fuselage and wings is doped fabric, with the exception of that part of the fuselage at the pilot's cockpit, which is covered with veneer.

The tail unit consists of a vertical fin built into the fuselage, with the normal type of unbalanced rudder with non-rigid trailing edge. These details apply also to the horizontal stabiliser and elevators. The entire unit is constructed of spruce, the horizontal stabiliser being constructed in two sections. The tail skid is of steel tube mounted on a tiny fin below the fuselage and sprung with rubber.

The undercarriage is, as previously mentioned, of steel tube faired with balsa wood, and is of conventional V-type, the upper ends of the V-formation of struts being attached to the fuselage at the points of termination of the sloping inter-plane bracing struts. In addition, for rigidity, and undoubtedly providing ample strength to the undercarriage, there are two bracing struts which come to a common point of termination under the forward bulkhead at the secondary girder already referred to. The axle is sprung with rubber shock-absorber cord in the usual manner.

As will be seen from the illustrations, the support for the centre section of the upper wing over the fuselage is completely faired into the top of the fuselage. This practice is also followed in the case of the lower wing, which is actually located a little distance below the fairing of the underside of the fuselage, the mounting being completely faired. This arrangement not only gives a very neat appearance, but also enables perfect continuity of the main spars in both upper and lower wings.

The power plant fitted in this machine, as previously stated, is a Bristol "Cherub" twin-cylinder horizontally opposed engine, which is faired under a very well-designed cowling. The airscrew is an all-metal Curtis-Reed, 4 ft. 6 ins. diameter by 3 ft. 1 in. pitch. The entire finish of the machine is in Valspar.

The principal characteristics of the Meyers "Midget" are:—

Span (top)	16 ft.
" (bottom)	12 ft.
Overall length	13 ft. 2 ins.
Area of top plane	45.5 sq. ft.
" bottom plane	24.5 sq. ft.
Total wing area	70 sq. ft.
Angle of incidence	3°.
Weight, empty	304 lbs.
" laden	480 lbs.
" per horse-power	16 lbs.
" per square foot	6.8 lbs.
Speed (approx)	100 m.p.h.
Fuel capacity	2.5 galls.
Oil capacity	3 qts.

MARSEILLES-MADAGASCAR-PARIS

A Fine 17,000-Mile Flight in a "Jupiter"-Engined Seaplane

LIEUT. BERNARD of the French Naval Air Service in his flight from Marseilles to Madagascar and back to Paris has accomplished a flight of more than usual interest. It was not only a splendid achievement as a long-distance flight, but was also remarkable in that it was the first big flight ever carried out by a seaplane in which the greater part of the route covered was over "land-waterways." In past great seaplane flights, such as Sir Alan Cobham's London-Australia-London, Commandant Franco's Spain-Buenos Aires, and Maj. Llorente's recent flight from Melilla to Fernando Po, the routes lay mainly over the sea or along the coast, whereas Bernard's "raid" took him over land for considerable distances, various rivers and lakes along the route supplying the necessary medium on which to alight and from which to take off.

As in the case of Sir Alan Cobham's big flights, the object of the Madagascar flight was primarily one of utility, and it was not intended as a "stunt" or record flight. For one thing it was hoped to serve as a test as to the value of the seaplane as a means of communication between the French African colonies, while at the same time it was in the nature of a survey flight, the opportunity being taken to prospect for new air routes in Africa.

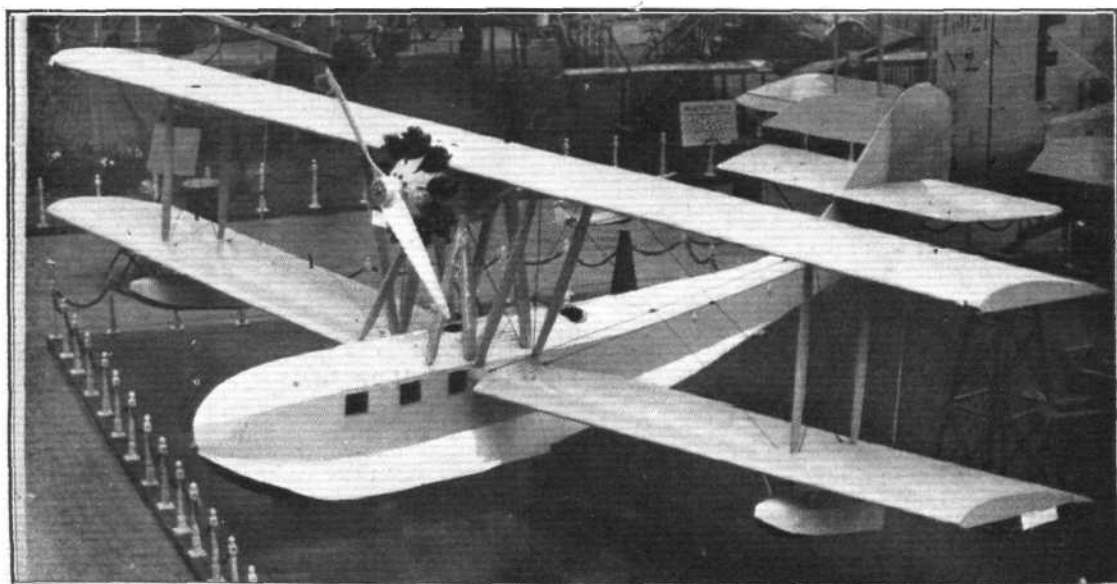
Originally two machines set out from Marseilles on

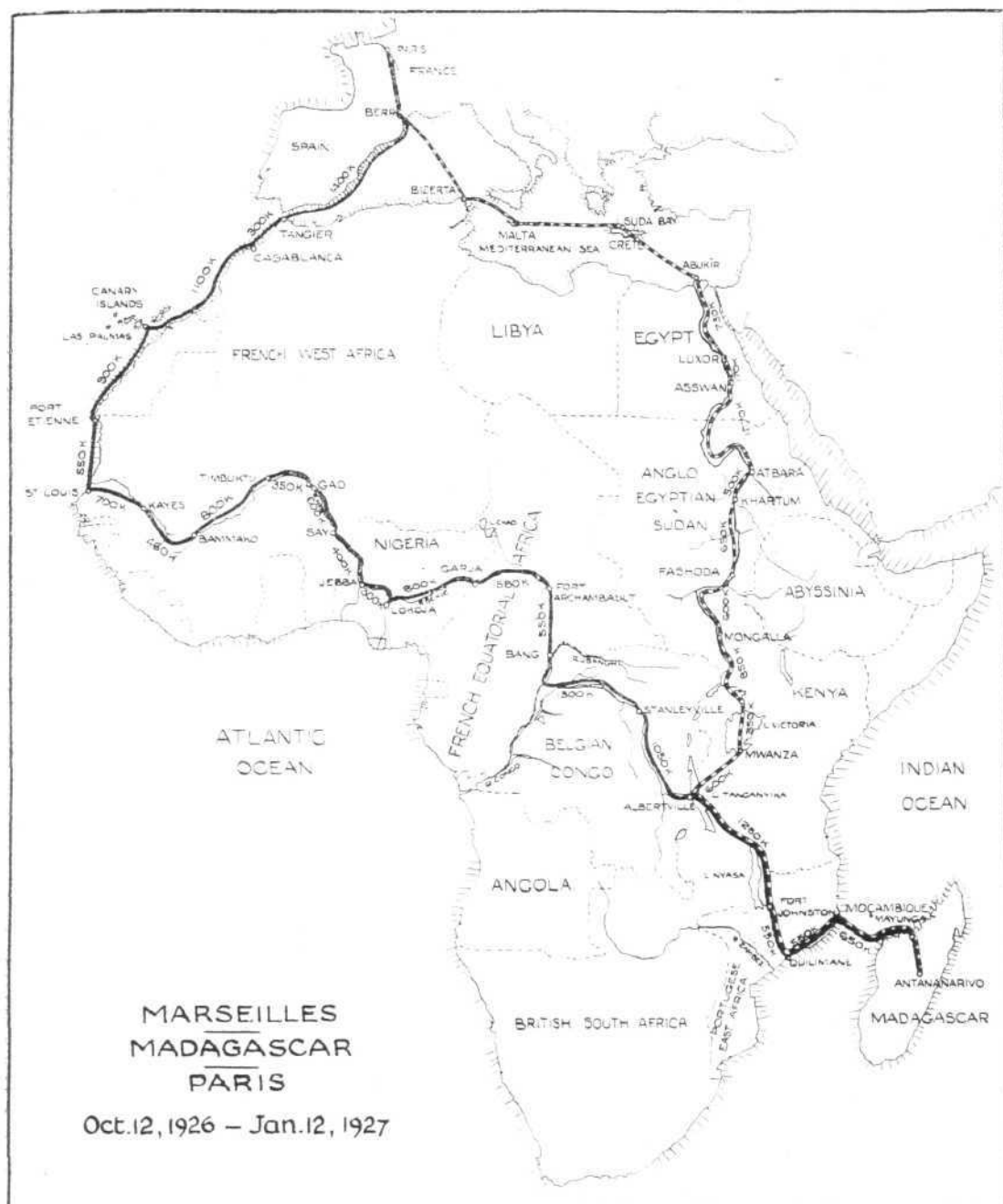
October 12 last, a Liore-Olivier LeO. H.190 flying boat, fitted with a Gnome-Rhone "Jupiter," piloted by Lieut. Bernard, and a C.A.M.S. 37 G.R. fitted with a Lorraine engine, piloted by Lieut. Guilbaud. The latter, however, met with misfortune comparatively early in the flight (near Lokoja, on the Niger) and damaged his machine, being thereby compelled to abandon the flight.

The route followed was a varied and interesting one, following, first of all, the north-west coast of Africa as far as the Senegal, thence across the heart of Africa to Mozambique, and then on to Madagascar—a total distance of over 9,500 miles. On the return flight Bernard took the route following the big lakes and the valley of the Nile, thence across the Mediterranean via Crete and Malta to Berre (Marseilles) and Paris—a total distance of some 7,600 miles. Thus, for the whole flight Lieut. Bernard covered over 17,000 miles during his three months' absence.

Briefly summarised the log of the outward journey is as follows, distances given in kms. and, in brackets, miles. Oct. 12, Marseilles-Tangier, 1,400 km. (870 miles); Oct. 13, Tangier-Casablanca, 300 km. (186 miles); Oct. 15, Casablanca-Las Palmas, 1,110 km. (683 miles); October 17 Las Palmas-Port Etienne, 900 km. (558 miles); Port Etienne-St. Louis,

Marseilles—
Madagascar—
Paris: The Liore-
Olivier LeO H.190
flying-boat
("Jupiter" en-
gine) used on this
flight was a ser-
vice model, simi-
lar to the com-
mercial type
shown here.





Marseilles—
Madagascar—
Paris :

Sketch map of the
routes taken by
Lieut. Bernard
on the out (solid
line) and home
(dotted line)
journeys of his
17,500-mile
flight.

550 km. (342 miles); Oct. 21, St. Louis–Kayes, 700 km. (435 miles); Oct. 25, Kayes–Bammaka, 460 km. (286 miles); Oct. 28, Bammaka–Timbuktu, 800 km. (497 miles); Oct. 29, Timbuktu–Gao, 350 km. (217 miles); Oct. 30, Gao–Gaya (Say), 600 km. (373 miles); Oct. 31, Gaya–Jebba, 400 km. (248 miles); Nov. 3, Jebba–Lokoja, 300 km. (186 miles);—here they left the river Niger to follow the Benoué, and Lt. Guilband abandoned the flight, leaving Lt. Bernard to proceed alone; Nov. 5, Lokoja–Garua, 800 km. (497 miles); Nov. 6, Garua–Ft. Archambault, 580 km. (360 miles); Nov. (?) Ft. Archambault–Bangi, 550 km. (342 miles); Nov. 13, Bangi–Stanleyville, 1,300 km. (807 miles); Nov. 14, Stanleyville–Albertville, 1,050 km. (652 miles); Nov. 17, Albertville–Ft. Johnson, 1,250 km. (777 miles); Nov. 19, Ft. Johnson–Quilimane, 550 km. (342 miles); Nov. 20, Quilimane–Mozambique, 550 km. (342 miles); Nov. 21, Mozambique–Majunga, Madagascar, 650 km. (440 miles); Nov. 22, Antananarivo, 380 km. (236 miles). Total distance, 15,520 km. (9,640 miles).

Return Flight.—Dec. 9, left Madagascar for Mozambique, 1,030 km. (640 miles); Dec. 11, Mozambique–Quilimane, 550 km. (342 miles); Dec. 12, Quilimane–Ft. Johnson, 550 km. (342 miles); Dec. 14, Ft. Johnson–Ketuta, Albertville, 1,250 km. (777 miles); Dec. 15, Ketuta–Mwanza, 600 km. (373 miles); Dec. 17, Mwanza–Kisumu, 350 km. (217 miles); Dec. 23, Kisumu–Mongalla, 850 km. (528 miles); Dec. 24, Mongalla–Fashoda, 600 km. (373 miles); Dec. 25, Khartoum, 650 km. (404 miles); Dec. 26, Khartoum–Atbara, 300 km. (186 miles); Dec. 27, Atbara–Asswan, 1,270 km. (789 miles); Dec. 28, Asswan–Luxor, 170 km. (105 miles); Dec. 29, Luxor–

Aboukir, 730 km. (453 miles); Jan. 6, Aboukir–Suda Bay, Crete, 725 km. (450 miles); Jan. 7, Suda Bay–Malta, 885 km. (550 miles); Jan. 8, Malta–Bizerta, 480 km. (298 miles); Jan. 12, Bizerta–Berre, Marseilles, 960 km. (596 miles); Jan. 14, Marseilles–Suresnes, Paris, 700 km. (435 miles). Total distance, 12,640 km. (7,858 miles). Grand total 28,160 km., approx. 17,500 miles.

On arriving at Berre, in company with an aerial escort Lt. Bernard naturally received a magnificent welcome, but nothing to that which was accorded him on his arrival at Paris when he landed on the Seine at Suresnes. This was reminiscent of Sir Alan Cobham's enthusiastic welcome when he alighted on the Thames at Westminster at the conclusion of his Australian flight. Lieut. Bernard and his mechanic, Petty Officer Bougault, were given an official reception immediately after alighting between the Suresnes and St. Cloud bridges, among those present being M. Georges Leygues (Minister of Marine), M. Leon Perrier (Minister for the Colonies), and M. Olivier (Governor of Madagascar). After delivering a speech of congratulation, M. Leygues conducted the two airmen to the Elysée, when they were received by the President, M. Doumergue. In recognition of their exploit, Lieut. Bernard has been promoted in the Legion of Honour to the rank of Officer, while Bougault has been promoted to the rank of warrant officer in the Navy.

We cannot conclude without an expression of gratification regarding one item in connection with this magnificent flight: that the 17,500 miles were accomplished with an engine of British design, built in France, which went through the ordeal without a falter and without a replacement.

THE SPANISH AFRICAN FLIGHT

A Successful 4,400-mile Journey by Three Flying-Boats

SOME further particulars, which we publish below, are to hand regarding the flight carried out by a Spanish squadron of three flying-boats from Melilla (Morocco) to Fernando Po (Spanish Guinea) last month—to which brief reference has already been made in *FLIGHT*.

This squadron consisted of three Dornier-Wal metal

Antonio Llorente and Ignacio Jimenez. Each machine carried in addition a navigator, a second pilot and a mechanic.

The little squadron was given the name "Atlantida"—in previous reports it was quoted as "Atlantic" owing to an error in the transmission of the messages—in memory of the countries which once connected Europe and Africa, before the Straits of Gibraltar opened a road from the Mediterranean into the Atlantic. Furthermore, to commemorate the early seafarers who first made the journey from Spain to Africa, the three flying-boats were christened "Andalicia," "Cataluna" and "Valencia."

As regards the route followed by this squadron, this lay from Melilla, on the Mediterranean coast of Morocco, via the Straits of Gibraltar along the west coast of Africa to Casablanca, Las Palmas, Port Etienne, Dakar, Konakri, Monrovia, Grand Bassam and Lagos, concluding at St. Isabel Bay, Fernando Po. The total distance flown was 7,090 kms. (4,400 miles), throughout which no serious trouble was experienced—one machine had to land at Rio de Oro in order to make a minor adjustment. They left Melilla on December 10 and arrived at their destination on Dec. 15.

The various stages of the flight ranged between 530 kms. (330 miles) and 990 kms. (615 miles), and were always covered in one day's flying. On an average, therefore, the machines flew 800 km. (500 miles) per day. The comparatively long total time taken by the squadron to make the complete journey is explained by the fact that they were held up at Las Palmas for six days owing to unfavourable weather conditions.

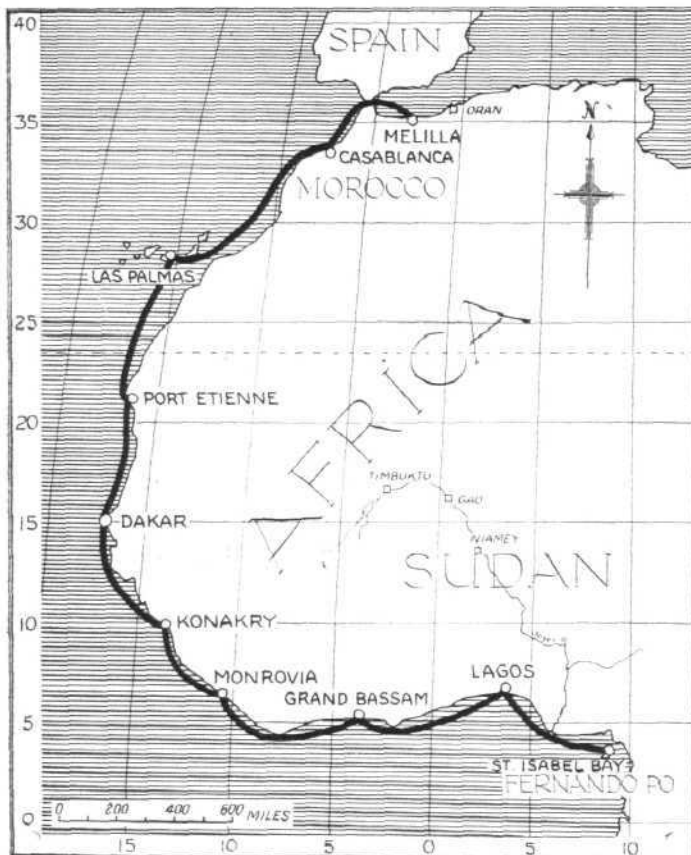
Nevertheless, the flight is remarkable in that the three flying-boats were able to cover the nine stages according to schedule—with the exception of the six days' hold-up—and on consecutive days.

The nine stages of the flight were made up as follows:—

Melilla—Casablanca ..	600 kms. (373 miles).
Casablanca—Las Palmas ..	990 kms. (615 miles).
Las Palmas—Port Etienne ..	900 kms. (560 miles).
Port Etienne—Dakar ..	760 kms. (472 miles).
Dakar—Konakri ..	760 kms. (472 miles).
Konakri—Monrovia ..	530 kms. (330 miles).
Monrovia—Grand Bassam ..	890 kms. (553 miles).
Grand Bassam—Lagos ..	880 kms. (546 miles).
Lagos—St. Isabel ..	780 kms. (484 miles).
Total distance covered ..	7,090 kms. (4,405 miles).

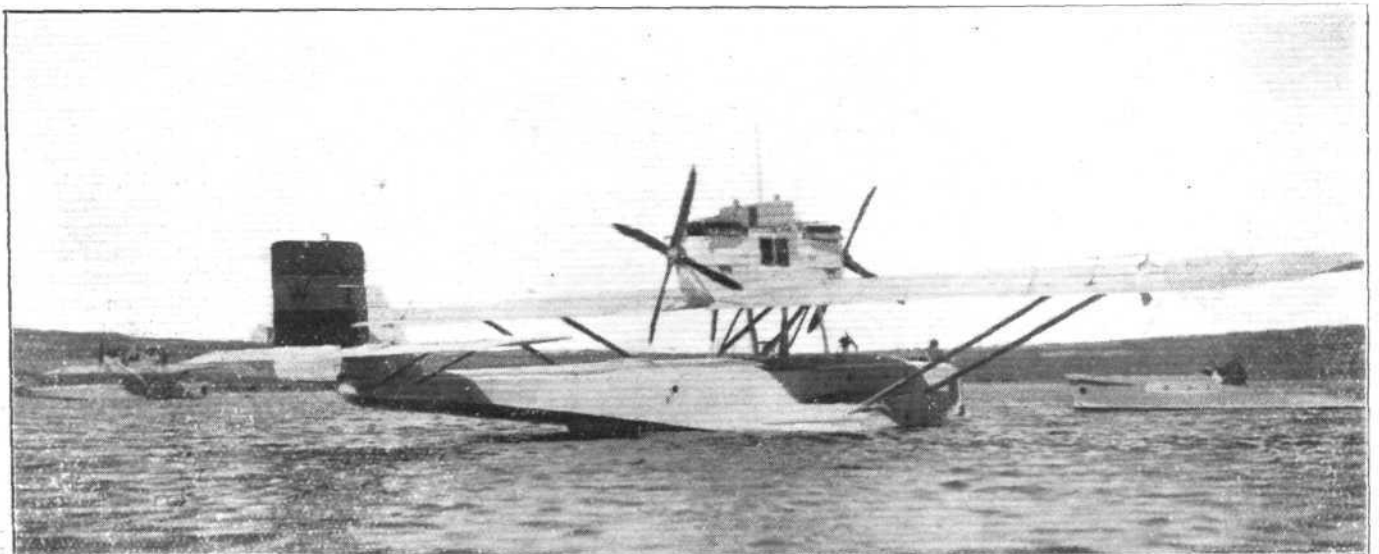
Thus we have yet another splendid long-distance "raid" in which British aero engines have maintained their reputation for efficiency and reliability.

It may be of interest to note in conclusion that Maj. Llorente's machine, "Valencia," was the first Dornier-Wal ever built, and it is stated that in spite of its five years' war service it is still as good as ever it was.



THE SPANISH AFRICAN FLIGHT: Sketch map showing the route taken by the three Dornier-Wal flying boats in their 4,400-mile journey.

monoplane flying-boats, each fitted with two Rolls-Royce "Eagle IX" engines, arranged in tandem. The flight was carried out under the command of Maj. Rafael Llorente, the pilots of the second and third machines being Capts.



THE SPANISH AFRICAN FLIGHT: The leader of the Melilla-Fernando Po flight, Major Llorente, piloted the first original Dornier-Wal (Rolls-Royce "Eagle IXs") flying boat, shown above, which had already seen five years' war service!



AIRISMS

FROM THE FOUR WINDS.

Air Liners and Wireless

THE more modern invention, wireless-telephony, is to give place to the older development, wireless telegraphy, in the air liners of Imperial Airways. The reason is that owing to the increasing volume of air traffic it was decided by the International Commission that pilots on large passenger-carrying liners should be relieved of wireless communication, hitherto operated by them. Telephony was used as the more simpler method for the pilot, it making no demands, of course, such as the telegraphy would with a transmitting key. The regulations now provide that all machines carrying 10 or more passengers shall have a wireless-operator on board to give his whole attention to telegraphy. This system will speed up wireless traffic and avoid confusion. Imperial Airways are training their mechanics as wireless operators at the Marconi Company's College, Chelmsford. The apparatus already installed in the air-liners will not be involved in the change over as the Marconi AD6 aircraft set, which is their standard equipment, is adaptable to both telephony and telegraphy by the simple action of a switch, and both will still be available if necessary. In its present stage of progress telephony is mostly used on aircraft for short distance work. It is very convenient when the pilot is alone.

Another Polar Flight

THE Detroit Arctic Expedition are planning a second air trip to the Pole, to leave Seattle for Fairbanks, Alaska, on February 12. The base will be established at Point Barrow, from which exploration flights will extend to a point 600 miles to the north-west where soundings will be taken. A former British Naval Officer, Mr. Hugh Duncan Grant, is co-operating in this new expedition, of which Captain George H. Wilkins will be the leader.

New Canadian Air Route

A NEW aerial transportation service will be inaugurated shortly between Winnipeg and the mining fields east of Lake Winnipeg in Manitoba, and to the adjacent mining country in Ontario. A large Fokker monoplane is on its way to Winnipeg from Peterborough, New Jersey, for this purpose and on this 1,700-mile flight Captain H. A. Oakes and a mechanic are demonstrating the feasibility of winter flying. At Camp Borden the wheels were changed for skis for safe landings on the snow. According to the latest report the machine had reached Sioux Lookout, Ontario. The service is being operated by Western Canada Airways, Ltd., of which Mr. James A. Richardson, of the Winnipeg Grain Exchange, is the President.

Western Australian Services

THE statistics for the month of November on the Western Australian Airways show that 156 passengers were carried during 70 flights covering a mileage of 11,536. This company's service ranges down the whole of Western Australia between Perth and Derby, and since its inception, 695,634 miles have been flown. For the month of October, 23,057 surcharged letters were carried to and from the North-West ports, which is an average number per month. Freight carried during November was 4,201 lbs. The service proved a boon to an enterprising commercial traveller recently, who ordered an urgent supply of petrol lamps from his Perth warehouse when the electric lights failed in a big North-West town, which were delivered by air the next day and retrieved the situation for his many clients. Excursions by air is the enterprising scheme of the Company's in the near future. They anticipate bringing the popular holiday resort of Yallingup within 1½ hours' flight from Perth, at excursion rates. Western Australian Airways operates the longest of the air routes in Australia, the total distance between terminal points being 1,442 miles.

Bristol "Jupiters" Abroad—and at Home

THE Bristol "Jupiter" engines are making great headway in France. On all the French commercial air routes with the exception of certain lines operated by the Farman Company with the Farman type engines, the "Jupiter" was in use at the close of 1926. [And even this company have fitted them on their Paris-Berlin route for which the subsidy given

is very small, whilst recently they despatched by air to Poland thirty-four Farman-Goliath machines, all installed with twin "Jupiter" engines, and the journey of 1,200 miles was accomplished by each machine without one forced landing or engine trouble of the slightest nature. Furthermore, two squadrons of this same type of machine with "Jupiter" engines have now returned to France for overhaul after service in the Morocco War. Each engine had run for over 175 hours and was yet found to be in excellent condition; this creating a record unequalled by any other type of engine used in the Farman-Goliath machines. In the Imperial Airways Handley-Page "Hampstead," operating on the Cologne route, the three Bristol "Jupiters" have just completed 104 hours running without giving any trouble at all or necessitating replacements. This total of 312 hours for the three engines is certainly a very good performance.

A Harmony in Blue

WITH regard to the coloured reproduction of the painting of the Gloster III, by Geoffrey Watson, to which we drew attention in our issue for January 13, we are asked by the Gloster Aircraft Company to inform our readers in response to the numerous requests for copies that only a very limited number now remain. These can be obtained from the Gloster Company at a price of 10s. 6d. per copy.

Ordnance Survey from the Air

WE have already called attention to the work of the Aircraft Operating Company. They have now received permission to call themselves "Contractors to the Ordnance Survey" as a result of a recent experiment which they carried out for them at Eastbourne, to which reference has already been made in *FLIGHT*. The Ordnance Survey produce the best maps in the world and their interest is an important development in air survey work and an honour for the Aircraft Operating Company.

Aerial Search for Colonel Fawcett?

IF no news is heard of Colonel P. H. Fawcett's expedition in the wilds of Brazil during the next few months a search by aeroplane may be considered by the American syndicate who are interested in this expedition. It is not contemplated immediately, as it was understood from Colonel Fawcett that he would be away for possibly two years after his start in the spring of 1925.

Air Minister's Tour

SIR SAMUEL HOARE and Lord Winterton, Under-Secretary for India, started from Delhi on January 17 with a flight of six service bombers (led by Group-Capt. Mills) on the tour of R.A.F. (India) stations. They arrived at Lahore that afternoon, stopping at Ambala en route, and reached Peshawar next day.

Swiss African Flight

THE Swiss scientific expedition which is journeying by air from Switzerland to Cape Town in a Dornier "Mercury" seaplane piloted by Lieut. Mittelholzer, has arrived at Jinja on Lake Victoria. The journey will be interrupted here for a time to enable Dr. Heim, a member of the expedition, and Lieut. Mittelholzer to make mountaineering expeditions in the neighbourhood.

U.S. Army Pan-American Flight

THE "Show-the-Flag" Flight being carried out by a squadron of five U.S. Army Loening amphibians under the command of Major H. A. Dargue, received a check in its progress round South America when it got as far as Guatemala. When taking off from Guatemala City, the leader's machine crashed, and it was some days before repairs could be completed. However, the squadron arrived safely at Managua, Nicaragua, on January 15, and later proceeded to Costa Rica.

29th Division Association Dinner

THE Annual Dinner of the 29th Division Association will be held on April 25 next, at the Café Royal, London. The Association and its President will be glad to welcome at this dinner any Air Force Officers who served at the Dardanelles. Applications for tickets should be made, not later than April 11, to the Secretary of the Association, Lieut.-Col. E. T. Wright, D.S.O., Heath House, Ewshott, Farnham, Surrey.

A MOST ENJOYABLE GATHERING

Hawker Annual Dinner a Great Success

A FEW weeks ago a French aviation journal quoted an instance of a British aircraft company calling attention to a specially meritorious performance carried out by an aeroplane designed and built by another British aircraft company, and asked the somewhat pertinent question whether anything of the sort could possibly have taken place in France. Good sportsmanship has always been one of the outstanding characteristics of the British aircraft industry. In the early days of flying this found expression in thousands of little ways, such as borrowing one another's spanners and screwdrivers and (sometimes) returning them. We have now rather outgrown the stage where the chief of a firm "pops" into the shed of his neighbour and rival constructor for the loan of some little article, or for the purpose of lending a hand, and heads of our aircraft firms now occupy positions of considerable eminence. Whether it is due to the fact that most of the British aircraft firms have grown up together from very modest beginnings, or whether to some influence peculiar to the aviation atmosphere, is difficult to say, but it is a very fortunate fact that the spirit of chivalry and good fellowship has survived to this day in British aviation circles. That this spirit is to be found in most other industries, even British industries is very doubtful.

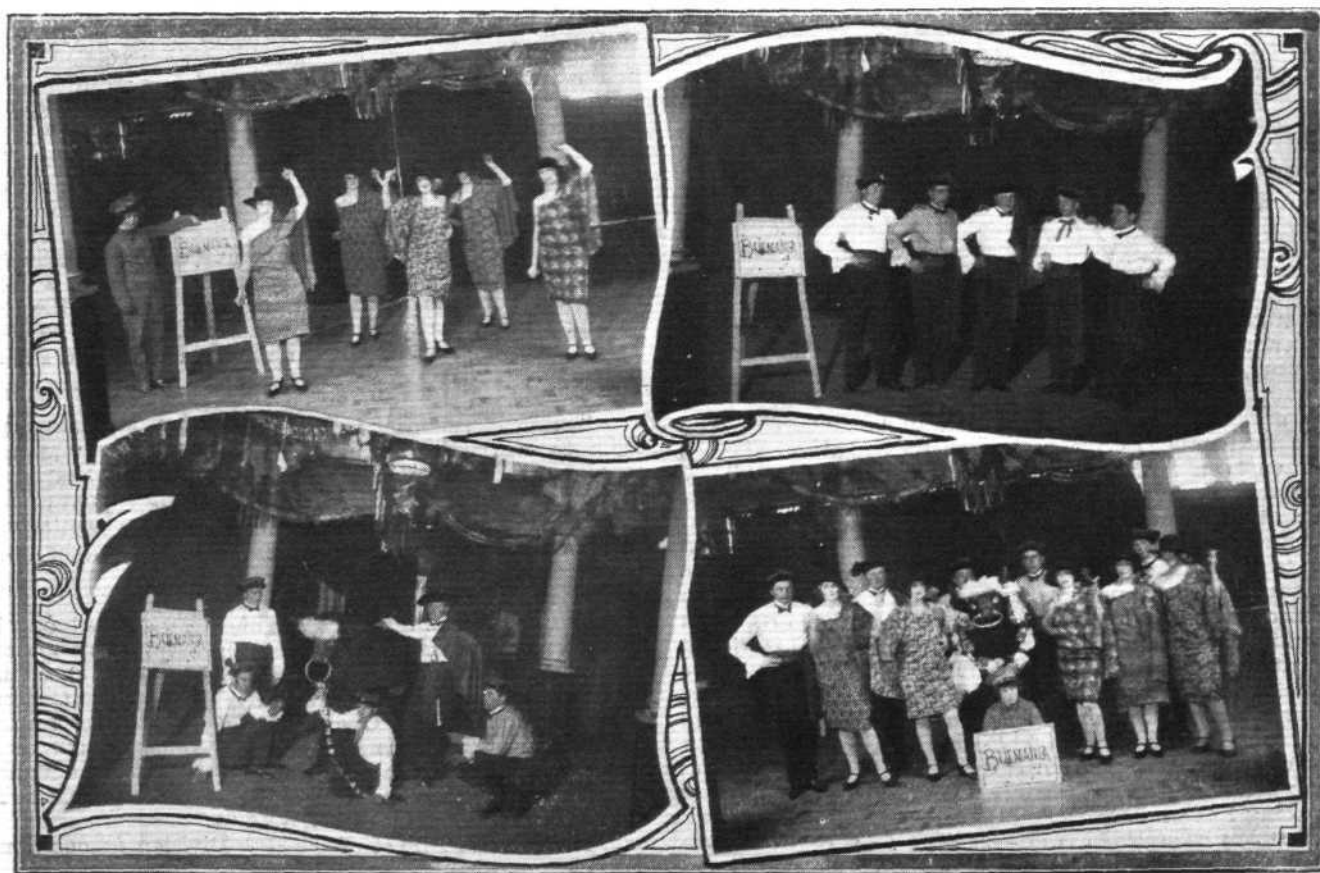
One was strongly reminded of this spirit of camaraderie at the gathering on Wednesday of last week, at Nuthall's restaurant, Kingston-on-Thames, at which, although the particular function was the annual staff dinner of the H. G. Hawker Engineering Co., Ltd., were present representatives of a number of other British aircraft firms, and of the Air Ministry. A very large number of guests sat down to a most excellent dinner, and as everybody knew everybody else, there was a delightful absence of restraint. When paper headgear was served out to the guests, the room presented a very gay spectacle, and Mr. Sopwith looked a quite fierce Apache in a peak cap, while Mr. Fairey's imposing proportions suited a three-cornered hat admirably. Really, it seems high time he was made Mayor of Hayes. As usual, Mr. John Lord provided a large share of the amusement, and his A.O.F.B. toasts were received with delight. Mr. Sopwith announced that in

accordance with precedent, there would be no speeches, but he wished to welcome everybody, and expressed the hope that the occasion would prove one of a very long series. In fact, one gathered that the Hawker Annual Dinner is to be put into quantity production. Mr. Percy Maxwell Muller said he would strictly observe the chairman's instructions that there should be no speeches, but asked leave to express the very great pleasure of the guests in being present.

After the dinner, those of the guests who were so minded, gave their undercarriages a thorough endurance test, and it is evident that there is a great deal of dancing talent in the aircraft industry. The surprise of the evening was, however, the "Hawker Cabaret," composed entirely of members of the firm. Their efforts, consisting of dancing and burlesque, were excellent. We have not the space to refer in detail to the programme, but some idea of its nature may be gathered from the following items:—"The Legoleo Girls (The "Limpne it"), Miss Gloria Cygnet, the £3,000 Hawker Soprano: "The Swan Song" and "Could I Fly with Metal Wings," Fynn and Ruddah, the Empennage Comedians in "Camm-Nashional Lyrics," and a hair raiser, The Froth Blowers, Billie the "Blaster" and Teddie the "Tornado."

The "World's Worst" presented, as the programme had it, for the first and obviously the last time, a one-act Wylie-Spartan tragedy entitled "Bulmania." The troupe were certainly rewarded for their hard work by the appreciation shown by the dancers, and it was generally agreed that the show was up to the "Hawker Standard"—than which no praise can be higher. Messrs. Sherras and McCoy deserve thanks for their work in connection with the Cabaret, and Mr. F. S. Spriggs, who was responsible for the inception and organisation of the whole evening, is to be congratulated on his efforts.

Among those present were:—Mr. T. O. M. and the Hon. Mrs. Sopwith, Mr. and Mrs. F. Sigris, Mr. F. I. Bennett, Mr. and Mrs. F. S. Spriggs, Mr. and Mrs. C. R. Fairey, Mr. and Mrs. Burroughes, Mr. and Mrs. Muller, Mr. J. Lord, Mr. F. N. St. Barbe, Flight-Lieut. and Mrs. Bulman, Mr. and Mrs. Mace, and Mr. and Mrs. S. Camm.



THE LATEST HAWKER PRODUCTION: Some snaps from the "World's Worst Cabaret in five Cammeos," entitled "Bulmania." This snappy little Cabaret came as a great surprise following the annual staff dinner of the H. G. Hawker Engineering Co., Ltd., held at Kingston on January 12. The cabaret, it should be pointed out, was composed exclusively of members of the firm.

THE ROYAL AIR FORCE

London Gazette Jan. 14, 1927.

General Duties Branch

The follg. are granted short service commss. as Pilot Officers on probation, with effect from and with seniority of Jan. 4:—A. R. S. Davies, R. F. Gandy, L. L. K. Honeyball, J. B. Knapp, A. McKee, J. H. L. Maund, P. C. Miller, H. F. Suren, F. J. Taylor, C. K. Turner, J. W. Wood. The follg. are granted temp. commss. as Flying Officers on attachment for four years' duty with R.A.F. (Jan. 4):—Lieutenants, R.N.—H. S. Cooper, D. M. L. Neame, A. O. Watson, R. F. Jessel, H. D. Smallwood, C. A. N. Hooper, A. C. G. Ermen, T. S. Jackson, C. Campbell. Sub-Lieutenants, R.N.—D. J. Margetts, S. G. Long, R. A. Kilroy.

Pilot Officer C. J. Veevers is promoted to rank of Flying Officer (Nov. 14, 1926). The follg. Flight Lts. are transferred to Reserve, Class A:—E. J. A. Burke (Jan. 7); T. A. Thornton (Jan. 10). The short service commss. of Pilot Officer on probation H. H. R. Schleman is terminated on cessation of duty (Jan. 12).

Medical Branch

Flight Lt. A. A. Townsend, M. B. is granted a permanent commss. in this rank (Jan. 12). The follg. Flying Officers are promoted to rank of Flight Lt.—J. M. Kilpatrick, M. B. (Jan. 7); F. L. White (Jan. 16). Flying Officer V. P. Ellis (Temp. Lt. General List, Army Dental Surgeon) relinquishes his temp. commss. on completion of service (Jan. 7).

Reserve of Air Force Officers

The follg. Pilot Officers are confirmed in rank:—E. P. Lash (Jan. 4); C. E. F. Riley (Jan. 11). Flight Lt. W. R. S. Humphreys, A.F.C., is transferred from Class C to Class B (Dec. 5, 1926).

The follg. Flying Officers relinquish their commissions on completion of service:—P. J. Bradley (Oct. 24, 1926); G. R. Terry (Dec. 12, 1926); A. W. C. Bayes (Jan. 1). The commission of Pilot Officer on probation C. E. F. Sayer, is terminated on cessation of duty (Nov. 21, 1926).

Princess Mary's R.A.F. Nursing Service

The following Staff Nurses are promoted to the rank of Sister:—Miss N. A. Hampton (Jan. 3); Miss E. Wilson (Jan. 7).

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Group Chaplain A. D. Warrington-Morris, C.M.G., O.B.E., to R.A.F. Depot, Uxbridge, pending posting on transfer to Home Establt., 4.12.26.

Wing Commanders: W. C. Hicks, A.F.C., to No. 1 Sch. of Tech. Training (Apprentices), Halton, to command No. 4 Apprentices Wing; 20.1.27. R. E. Saul, D.F.C., to R.A.F. Depot, Uxbridge, for course at Staff College, Camberley; 9.1.27. G. F. Pretymann, D.S.O., O.B.E., to R.A.F. Depot, Uxbridge; 1.1.27. R. J. F. Barton, O.B.E., to R.A.F. Station, Duxford, pending taking over command; 1.2.27.

Squadron Leader C. C. Darley, A.M., to H.Q., India, 23.12.26.

Flight Lieutenants:—J. S. Chick, M.C., A.F.C., to Marine Aircraft Experimental Establt., Felixstowe, 23.12.26. H. W. Woollett, D.S.O., M.C., to No. 24 Sqdn., Kenley, 4.1.27. S. P. Simpson, M.C., to R.A.F. Cadet Coll., Cranwell, 14.1.27. W. A. K. Dalzell, to Central Flying Sch., Wittering,

15.1.27. S. H. Ware to Station Commandant, Hinaidi, 3.12.26. H. Norrington, to H.Q., Coastal Area, 14.1.27. W. S. Allen to Station H.Q., Andover, 18.1.27. C. H. Flinn to No. 4 Armoured Car Coy., Iraq, 17.12.26.

Flight-Lieutenant: W. R. B. Annesley to R.A.F. Training Base, Leuchars; 15.1.27.

Flying Officers:—C. J. Collingwood and H. H. Brookes, to No. 1 Flying Training Sch., Netheravon, 4.1.27. J. Harston to R.A.F. Staff College, Andover, 2.2.27. F. V. Beamish and R. P. P. Pope, D.F.C., to No. 5 Flying Training Sch., Sealand, 4.1.27. H. W. Raeburn, to No. 2 Flying Training Sch., Digby, 4.1.27. T. H. Perry-Keene, to R.A.F. Cadet Coll., Cranwell, 4.1.27. K. C. Baker, to R.A.F. Depot, Uxbridge, on transfer to Home Establt., 12.12.26. (Hon. Flt. Lt.) W. B. O. Fox, to No. 12 Sqdn., Andover, 9.9.26. E. B. Forster, to No. 30 Sqdn., Iraq, 11.12.26. G. I. C. Peacocke, to Aircraft Park, India, 8.12.26. A. W. Rowbotham, to Stores Depot, Iraq, 4.12.26. H. N. Davies, to Inland Water Transport, Iraq, 13.12.26.

WORLD'S RECORDS

THE Royal Aero Club has received the following Official World's Records from the Fédération Aéronautique Internationale:—

Greatest Distance in a Straight Line without Landing.

Lieut. Costes and Capt. Rignot on a Breguet XIX 500 h.p. Hispano Suiza, Le Bourget to Jask, October 28 and 29, 1926, 5,396 km.

Speed over 100 Km. (Seaplanes).

Mario de Bernardi on Macchi S. 39, 800 h.p. Fiat, at Hampton Roads, Norfolk, U.S.A., November 13, 1926, 399.423 km. per hour.

Greatest Speed over 3 Km. (Seaplanes).

Mario de Bernardi on Macchi S. 39, 800 h.p. Fiat, at Hamp-

ton Roads, Norfolk, U.S.A., on November 17, 1926, 416.618 km. per hour.

BRITANNIA TROPHY

THE Committee of the Royal Aero Club will consider the award of the Britannia Trophy for the year 1926 at its meeting in February next. The Britannia Trophy is awarded each year "to the British Aviator, who, in the opinion of the Committee of the Royal Aero Club, shall have accomplished the most meritorious performance in the air during the year." The Royal Aero Club will be glad to receive particulars of any meritorious performances for consideration by the Committee when making the award. Particulars should be addressed to the Secretary, Royal Aero Club, 3, Clifford Street, London, W.1, not later than February 7, 1927.

Royal Aeronautical Society Notices



Elections.—The following members were elected at a recent Council meeting:—

Fellows.—Mr. A. V. Roe, Mr. R. S. Capon and Wing-Commander R. M. Hill, M.C., A.F.C.

Associate Fellows.—Mr. M. L. Bramson, Mr. H. Burroughes, Squadron-Leader E. Harrison, R.A.A.F., Squadron-Leader F. E. Hellyer, R.A.F., Lieut.-Col. H. E. S. Holt, C.B.E., Mr. H. A. Hughes, Major R. E. Penny and Mr. W. E. Whedon.

Associates.—Mr. W. E. Barber, Mr. W. H. Blanch, Mr. H. J. Griggs, Mr. T. E. Johnson, Flight-Lieut. W. G. Meggitt, R.A.F., Mr. G. W. Saynor, Flying Officer C. Sutton, and Flying Officer J. H. C. Wake.

Student.—Mr. C. Chapleo.

Silver Medal.—The Silver Medal of the Society has been awarded for 1926 to Professor B. Melvill Jones, A.F.C., F.R.Ae.S., for his paper, "Control of Stalled Aeroplanes," published in the Journal of the Royal Aeronautical Society, June, 1926. The Silver Medal is awarded annually for the best paper published in the Journal.

Elliott Memorial Prize.—The A.O.C. at Halton has expressed his cordial approval of the proposed Elliott Memorial Prize, and is at present drafting suggested regulations for the prize. As previously announced, the Elliott Memorial Prize will be one of five guineas, awarded annually for a paper by a boy being trained at Halton, as a memorial to the late Mr. A. B. Elliott.

J. LAURENCE PRITCHARD, Secretary.

Westland Aircraft Society. Yeovil Branch of the R.Ae.Soc.

ON January 7 the Society held a General Interest Lecture, Mr. R. A. Bruce presiding, when Sqdn.-Ldr. Sir C. J. Quintin Brand, K.B.E., D.S.O., M.C., D.F.C., read a paper on "My African Flight." The following is a brief résumé of this lecture:—

The machine in which this flight was started was a Vickers-Vimy with two Rolls-Royce "Eagle" engines. Sufficient petrol, oil and water for stages of about 13 hours' duration could be carried, and this load, together with personnel and 5 cwt. of spare parts, made up the total loaded weight of the machine to about 13,000 lbs.

The crew comprised Lieut.-Col. Sir H. A. Van Ryneveld as pilot, the lecturer as second pilot, and Flight-Sergt. Newman and Mr. F. W. Sherratt as mechanics.

The original intention was for the lecturer to do all night flying, and the

other pilot to do all day flying, but this was changed for the sake of convenience, and shorter spells of piloting by each in turn were agreed upon.

Passing over France, Italy and along the Grecian coast the trans-Mediterranean stage was attempted by night, for it was argued that, with a land machine, to cross by day would be very little safer, the chances of seeing surface craft being somewhat remote. Navigation was aided considerably by making use of the stars. During this stage the pilot had a feeling that the wind direction had changed, although there was no ground object from which to check the drift. This feeling strengthened into a conviction, and by the feel of the machine it was deduced that a strong north-west wind had developed, and the course was accordingly changed. A landing was made in Italian territory on the northern coast of Africa, and the next stage brought them to Helopolis. Thence the route followed was via the Nile valley, passing via Khartoum and Mongalla to Kisumu.

It was on this northern section of the route that on landing in the dark they had the misfortune to run into a large boulder, the only one of any size on the aerodrome, the machine being so badly damaged thereby that a new one was obtained. The route thence lay via Tabora, Abercorn, N'Dola, Livingstone to Bulawayo; this portion of the route bringing them over some very wild country, but including some wonderful scenery, notably the world-famous Victoria Falls. From Bulawayo to Cape Town the flight was completed on a D.H.9 (with "Puma" engine), due to the crashing of the Vimy by colliding with a tree bordering the aerodrome when taking off with a considerable overload. The nature of the crash could be realised from the slides shown, and it was apparent that the pilots had a miraculous escape from death as their cockpit was simply "wiped out," yet they received only minor injuries.

On the latter half of the route the interesting spectacle of the formation of a cloud, due to the presence of a bush fire, was seen and photographed. The lecturer laid stress on the remarkable visibility which obtains over the South African territory, and this, combined with the ideal conditions of the ground from the point of view of emergency landing, led him to declare that this portion of the route—and, in fact, the greater part of South Africa—is ideal for flying.

The lecturer was loudly applauded at the conclusion of his eloquent description of a world-famous flight.

Messrs. R. A. Bruce, A. Davenport, A. S. Keep, W. G. Gibson, D. W. Kennan, and V. S. Gaunt contributed to the discussion, and after the lecturer had responded to their enquiries, Mr. R. A. Bruce, the President of the Society, asked Alderman P. W. Petter (the Mayor), to propose a vote of thanks.

CORRESPONDENCE

[The Editor does not hold himself responsible for opinions expressed by correspondents. The names and addresses of the writers, not necessarily for publication, must in all cases accompany letters intended for insertion in these columns.]

FLYING AND COMFORT

[2148] As a passenger in the "Hercules," leaving London on December 20 and arriving at Cairo first, two days before the machine carrying Sir Sefton Brancker (our own being 26 hrs. 2 mins. flying time), I can testify, in answer to your doubt whether passengers would care to spend two or three days in air travel owing to the noise, that not one of us three passengers minded the noise of the machine half as much as the noise of jazz in the hotels and the shrill motor hooters outside them which kept us awake till after midnight, when we had to get up at 4.30 a.m. for five days running.

It was our own request that we should get up and away as early as possible; there was no discomfort or strain in the actual flying. The only weariness was waiting about on aerodromes and being bumped over bad roads in motor cars whose jolting, after the smoothness of the aeroplane, seemed unusually severe! This, however, could not be avoided, and the other two passengers join with me in expressing our appreciation of Captain Hinchliffe, our pilot, whose fine performance and consideration for our comfort we much appreciate.

On the Cairo-Karachi service, starting on April 6, on which I hope also to travel, accommodation will probably be nearer the aerodromes, and heat and desert sand will probably be the main discomforts. But any minor discomforts are entirely compensated for by the joy of flying, and I count myself fortunate to have been one of the first women to arrive in Cairo by air from London.

San Stefano,
January 5, 1927

STELLA WOLFE MURRAY

[The reference of Miss Stella Wolfe Murray to our "doubt as to whether . . ." is presumably to our Editorial Comment of December 23, 1926. The passage referred to related, however, to day and night flying, and what we meant was that probably few passengers would care to fly more or less continuously day and night for 48 or 72 hours. That this was the sense of our comments is quite obvious from the concluding sentence: "but there does not seem to be any technical reason why air mails should not be flown at night . . ." However, we are very glad to learn that the first anthologist of the poetry of aviation has enjoyed her flight and has not found the flying part of it fatiguing.—ED.]

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THE SUPERMARINE SPORTS AND SOCIAL CLUB

The Supermarine Aviation Company's Sports and Social Club held their third annual *conversazione* on January 7, and it proved to be the biggest social event organised by any local firm for the benefit of employees. Some 700 guests crowded to the varied entertainments admirably arranged by the entertainment committee, and seven joyous hours were spent, with amongst other items, two concerts, a burlesque show, dancing, fancy-dress parade, competitions and prize-giving. The burlesque entitled "S.O.S." written mainly by Commander J. Bird (Managing Director) in seven minutes!—another Supermarine record, easily beating the record when the "Southampton" was built in seven months and preventing another possible record when the "Seamew" is built in seven years—had an appropriate aeronautical flavour, the cast including an air pilot (Capt. H. C. Biard) and two wrecked air passengers. The scenery depicted a part of the Supermarine slipway with a wrecked "Seagull" flying-boat. The air crash was so realistic that Commander Bird's villainous moustache fell off and the two rescued passengers started to sing about Supermarine celebrities. The prizes were given by Miss Munday, followed by a brief review of the firm's sport activities and future plans (which might include a half-day regatta), by Commander Bird, who then referred to the excellent scheme for the education of the firm's aircraft apprentices which has now been in operation for over a year. Forty apprentices regularly attended evening school at the Institute and elementary schools, and their headmaster's reports had been very favourable. Twenty had gained attendance to the University College for one day a week through passing examinations. Six of these had achieved a 1st class exhibition, eight a 2nd class exhibition, and two had won exhibitions

at the evening schools. This scheme to ensure the future supply of competent aircraft artisans is admirable and a far-seeing policy that should be widely adopted. The future of the air will depend as much upon the skilled worker as the theories of the scientist. A vote of thanks was unanimously awarded to Commander Bird and all the directors at the conclusion of a record evening in social enterprise.

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IMPORTS AND EXPORTS, 1925-1926

AEROPLANES, airships, balloons and parts thereof (not shown separately before 1910).

For 1910 and 1911 figures see FLIGHT for January 25, 1912.

For 1912 and 1913, see FLIGHT for January 17, 1914.

For 1914, see FLIGHT for January 15, 1915, and so on yearly. The figures for 1925 being given in FLIGHT, January 21, 1926.

	Imports.		Exports.		Re-Exports.	
	1925.	1926.	1925.	1926.	1925.	1926.
Jan. . .	3,546	494	83,728	130,049	291	—
Feb. . .	985	2,089	85,639	40,416	20	6,341
Mar. . .	—	1,001	56,881	92,840	9,355	9,758
Apr. . .	321	536	78,041	160,832	6,732	5,051
May . .	560	342	74,844	118,539	15,278	—
June . .	190	24,866	71,009	63,111	667	150
July . .	184	16,033	159,262	39,047	870	—
Aug. . .	469	21,401	113,054	146,129	—	1,035
Sept. . .	1224	3,172	111,237	55,674	213	—
Oct. . .	460	528	114,563	41,968	855	30
Nov. . .	837	1,069	84,163	118,648	2,314	250
Dec. . .	1,806	2,972	104,745	112,913	19,004	—
	10,542	74,503	1,151,010	1,123,166	55,199	22,615

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NEW OIL STORAGE EQUIPMENT

The waste and mess involved by the familiar oil barrel is a problem only too well known to those who have to handle lubricating and other oils on a large scale. A new and very moderately priced storage tank equipment has just been placed on the market by the Dowson and Mason Gas Plant Co., of Levenshulme, Manchester, which it is claimed, efficiently deals with this problem. It comprises a steel tank with a semi-rotary wing pump having a non-drip nozzle and a pan with filter to return the surplus. Recording meters can be fitted. But the chief merit of these sets is the arrangement for hoisting the barrel over the tank orifice so that when the bung is withdrawn the barrel may be left to drain itself to the last drop. This overcomes what is commonly the chief source of wastage in handling barrels.

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AERONAUTICAL PATENT SPECIFICATIONS

(Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.)

APPLIED FOR IN 1925

Published January 20, 1927.

- 25,920. SUPERMARINE AVIATION WORKS, LTD. and R. J. MITCHELL. Aircraft. (263,253.)
27,470. D. J. MOONEY. Framework members for aircraft. (263,264.)
31,089. F. H. PAGE and HANDLEY PAGE, LTD. Means for laterally controlling aircraft. (263,290.)

APPLIED FOR IN 1926

Published January 20, 1927.

- 21,300. J. J. CALLAHAN. Screw propellers. (263,440.)

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The Aircraft Engineer and Airships

36, GREAT QUEEN STREET, KINGSWAY, W.C.2.

Telephone: Gerrard 1828.

Telegraphic address: Truditur, Westcent, London.

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